- Index -

SOVIET ASTRONOMY - AJ

Volume 4

SOVIET ASTRONOMY - AJ: AUTHOR INDEX FOR VOL. 4

(Russian original Vol. 37, 1960, the journal Astronomicheskii Zhurnal)

Abele, M. K. Long-Focus Cameras for Determining Coordinates of Faint Artificial Earth Satellites - 134

Agekyan T. A. General Features of the Evolution of Rotating Systems of Gravitating Bodies - 298

Ambartsumyan, V. A. and G. S. Saakyan. The Degenerate Superdense Gas of Elementary Particles - 187

Amenitskii N. A., R. I. Noskova, and A. E. Salomonovich. Radioimage of the Moon at 8 mm - 177

Antonov, V. A. Remarks on the Problem of Stability in Stellar Dynamics - 859

Arakelyan, M. A. Application of the Probability Method to the Determination of Absorption-Line Profiles - 945

Artyukhina, N. M. Photographic Proper Motions and the Mean Parallax of RW Aurigae Variables - 91

Barabashov, N. P. and V. I. Garazha. Some Remarks on the Dust and Haze Formations on Mars - 473

Barabashov, N. P. and I. K. Koval'. Results of Studies of Contrast on Mars - 283

Barkhatova, K. A. and E. L. Chentsov. A Study of the Open Cluster NGC 1605 - 812

Barkhatova, K. A. and L. I. Dryakhlushina. The Open Cluster NGC 1513 - 313

Baulin, I. V., see Sopel'nikov, M. D. - 145

Bobrov, M. S. Theoretical Phase Curves of the Shadow Effect on Saturn's Rings. I. Derivation of Pertinent Formulas - 288

Bobrov, M. S. Types of Irregular Geomagnetic Disturbances and the Mechanism of Interaction of a Solar Corpuscular Stream with the Outer Atmosphere - 392

Borodina, G. V. Calculations of the Flux of Stellar Radiation on a Spectrograph Slit - 841

Boyarchuk, A. A., Yu. S. Efimov, and V. E. Stepanov. The Increase in the Equivalent Widths of Absorption Lines in a Magnetic Field - 766

Brengauz G. E. Contribution to the Detection of the Absorption Radio Line of Interstellar CH Molecules - 554

Bryzzhev, L. D., A. Ya. Leikin, and M. D. Sopel'nikov. Determination of Frequency of a Maser, and of Irregularities in the Earth's Rotation - 549

Butkevich A. V. The Application of Geodetic Principles to Practical Astronomy - 154

Chentsov, E. L., see Barkhatova, K. A. - 812

Chistyakov, V. F. The Circulatory Nature of the Eleven-Year Cycle of Solar Activity - 405

Demin V. G. Orbits in the Problem of Two Fixed Centers - 1005

Dibai, É. A. The Origin of Cometary Nebulae - 13

Dibai, É. A., F. A. Tsitsin, and A. S. Sharov. The Application of the Virial Theorem to the Dynamics of Star Clusters - 628

Dimov, N. A. An Integrating Stellar Spectrophotometer - 440

Dokuchaev, V. P. Formation of an Ionized Meteor Trail - 106

Drichko, N. M., see Ioffe, S. B. - 1032

Dryakhlushina, L. I., see Barkhatova, K. A. - 313

Dzhasybekova, É. K., V. M. Kazachevskii, and A. V. Kharitonov. Determination of the Earth's Albedo - 125

Efimov, A. A. and Yu. M. Otryashenkov. Photoelectric Method for Recording Circle Readings of Meridian Instruments - 140

Efimov, Yu. S., see Boyarchuk, A. A. - 766

Einasto, Ya., see Liigant, M. - 1023

Esipov, V. F. Stellar Photography Using an Electronic Telescope - 558

Esipov, V. F. Increasing the Sensitivity of Emulsions Used in Photography with Long Exposures - 1037

Ezhov, N. N. Choice of Celestial Body for Compass Error Determinations in the Case of Dead Reckoning Errors - 166

Fesenkov, V. G. Photometric Peculiarities of the Moon - 468

Fesenkov, V. G. The Presence of Elliptical Polarization in the Light of the Day Sky - 741

Fesenkov, V. G. The Polarization of Emission Lines in the Spectrum of the Night Sky - 749

Fialko, E. I. The Velocity Distribution of Meteoroids - 334

Fialko, E. I. The Duration Distribution of Meteor Radio Echoes. II. Reflections from Unstable Trails - 498

Fialko, E. I. The Dependence of the Mean Hourly Rates of Recorded Meteors on the Parameters of Meteoroids, the Atmosphere, and the Radar System - 711

Furman, A. M. The Theory of Ionization in Meteor Trails. I. Kinetics of the Variation of Ionization Parameters for Meteoroids Heated by Motion in the Earth's Atmosphere - 489

Furman A. M. A Theory of Ionization of Meteor Trails. II. The Role of Ionization Phenomena at the Surface of a Meteoroid in the Ionization of the Meteor Trail - 705

Garazha, V. I., see Barabashov, N. P. - 473

Gershberg, R. E. and V. I. Pronik. The Suspected Peculiar Nebula Near η Geminorum - 1055

Gintsburg, M. A. The Generation of Plasma Waves by

Solar Corpuscular Streams - 913
Gnevyshev, M. N. The Relationship Between Optical and Radio-Frequency Emissions of the Solar Corona - 217
Gorbatskii, V. G. The First Plenum of the Commission on the Physics of Stars and Nebulae - 340
Gordon, I. M. Supernova Outbursts and the Origin of Cosmic Rays - 234
Gordon, I. M. The Nature of γ-Emission in Solar Flares and the Formation of Cosmic Particles in Active Solar Regions - 874
Gorelova, M. V., see Vitkevich, V. V. - 595
Grebenikov, E. A. Conference on Problems in the Mathematical Theory of the Motion of Artificial Celestial Bodies - 343
Gringauz, K. I., V. G. Kurt, V. I. Moroz, and I. S. Shklovskii. Results of Observations of Charged Particles Observed out to R = 100,000 km, with the Aid of Charged-Particle Traps on Soviet Space Rockets - 680
Gulak, Y. K. Remarks on the Explanation of the Propagation of a Light Wave Around Nova Persei 1901 - 653
Gulyaev, R. A., see Ivanov-Kholodnyi, G. S. - 754
Gutman, A. M. and I. B. Levinson. Nonhomogeneous Vector Coupling in Atomic Spectra - 83

Ikhsanov, R. N. Nebulae 1318a, 1318b, 1318c, and Interstellar Absorption - 258
Ikhsanov, R. N. Some Problems in the Interrelation of Stars and Nebulae, and Their Evolution - 613
Ikhsanov, R. N. On the Nature of Cyg X - 923
Ioffe, S. B. and N. M. Drichko. A Birefringent Filter for Astrophysical Studies of the Sun in the K Line of Ionized Calcium - 1032
Ishchemko, M. A., Yu. P. Platonov, and V. B. Sukhov. An Oscillographic Apparatus for the Reception of Time Signals - 150
Ivanov, V. V. - Chromosphere Line Profiles - 954
Ivanov-Kholodnyi, G. S., G. M. Nikol'skii, and R. A. Gulyaev. Ionization and Excitation of Hydrogen. I. Elementary Processes for the Upper Levels - 754

Kaplan, S. A. and I. A. Klimishin. Some Notes on the Emission of Light by Shock Waves under Cosmic Conditions - 264
Kaplan, S. A., I. A. Klimishin, and V. N. Sivers. The Scattering of Light in a Medium with a Moving Boundary - 7
Kaplan, S. A. and V. G. Kurt. Expansion of a Sodium Cloud in Interplanetary Space - 508
Kaplan, S. A. and V. N. Sivers. The General Problem of the Scattering of Light in a One-Dimensional Medium with a Moving Boundary - 776
Karyagina, Z. V. The Energy Distribution in the Spectrum of Zodiacal Light - 828
Kashcheev, B. L. and V. N. Lebedinets. The Structure of the Quadrantid Meteor Stream - 114
Katasev, L. A., V. N. Korpusov, and A. D. Orlyanskii. Radar Echo Observations of Meteors Using Two Receivers of Different Sensitivity - 110
Kazachevskii, V. M., see Dzhasybekova, É. K. - 125
Kharitonov, A. V., see Dzhasybekova, É. K. - 125
Khokhlova, V. L., see Severnyi, A. B. - 19
Kirillova, T. S. A Statistical Analysis of the Color-Magnitude Diagram of the Open Cluster IC 1805 - 308
Klimishin, I. A., see Kaplan, S. A. - 7
Klimishin, I. A., see Kaplan, S. A. - 264
Klyakotko, M. A. The Latitudinal Motions of Nonrecurrent Sunspots in Different Years as Members of a Single Aggregate - 330
Kornilov, A. I. The Effect of Sunspot Magnetic Fields on the Growth Curve - 174
Korpusov, V. N., see Katasev, A. V. - 110
Kotlyar, L. M. A New Design of a Differential Photometer for a Solar Magnetograph - 445
Kotlyar, L. M. A Recording Microphotometer Capable of Automatic Transformation of the Density of Photographic Emulsions into Corresponding Intensity Values - 833
Kotok, É. V. The Interpretation of the Spectrum-Luminosity Diagram for the Pleiades - 465
Koval', I. K., see Barabashov, N. P. - 283
Kramer, E. N. Results of a Study of Photographs of the Bolide of May 11, 1955 - 696
Krasnozhenov, E. P. and V. V. Porfir'ev. Absorption Line Profiles in Spectra of Novae - 560
Kunitskii, R. V. The Simultaneous Determination of Latitude and Longitude from Absolute Measurements of the Altitudes of Two Stars - 1046
Kupo, I. D. A Spectrophotometric Study of χ Ophiuchi. II. Some Properties of the Emission Spectrum of χ Oph. - 85
Kurochkin, N. E. Luminosity-Variation Amplitudes and the Applicability of a Blackbody Model to the Study of Cepheids - 97
Kurt, V. G., see Gringauz, K. I. - 680
Kurt, V. G., see Kaplan, S. A. - 508
Kurt, V. G., see Shklovskii, I. S. - 871
Kuz'min, A. D., M. T. Levchenko, R. I. Noskova, and A. E. Salomonovich. Observations of Discrete Radio Sources on 9.6 cm - 909
Kuz'min, A. D. and A. E. Salomonovich. Radio Emissions from Venus in the 8 mm Band - 279

Lebedinets, V. N., see Kashcheev, B. L. - 114
Leikin, A. Ya., see Bryzzhev, L. D. - 549
Levchenko, M. T., see Kuz'min, A. D. - 909
Levinson, I. B., see Gutman, A. M. - 83
Liigant, M. and Ya. Einasto. The Theory of Automatic Satellite Tracking Telescopes - 1023
Likhachev, A. I. The Diurnal Sunlit Component of F2 Layer Ionization During the First Half of the Day - 129

Lipskii, Yu. N. The Photography of the Reverse Side of the Moon - Techniques and Preliminary Results - 976
Lozinskii, A. M. Photography of Space Rockets - 876

Makeev, N. N. A Generalization of the Eddington-Poincaré Equation - 1058
Marochnik, L. S. The Form of Cometary Envelopes - 480
Martynov, D. Ya. The Radius of Venus - 798
Masevich, A. G. and T. G. Volkonskaya. The Structure of the Sun - 40
Mikhailov, A. A. The Solar Eclipse of February 15, 1961 - 64
Mikhailov, A. A. Antonin Becvar, Atlas Eclipticalis, 1950 - 739
Minin, I. N. Motion of the Envelope of a Variable Mass - 878
Mirtov, B. A. The Mechanism of Formation of a Meteor Trail - 485
Mitropol'skaya, O. N. The Relation Between the Delay Time of Geomagnetic Disturbances and the Relative Sunspot Number - 60
Mogilevskii, É. I., G. M. Nikol'skii, and K. I. Nikol'skaya. The Polarization of Coronal Emission Lines - 225
Moroz, V. I. The Night-Airglow Infrared Emission Spectrum to 3.4μ - 118
Moroz, V. I. The Radiation Flux from the Crab Nebula at λ 2μ, and some Conclusions on the Spectrum and Magnetic Field - 250
Moroz, V. I., see Gringauz, K. I. - 680
Moroz, V. I., see Shklovskii, I. S. - 871
Mustel', É. R. The Total Energy of Corpuscular Streams - 202
Mustel, É. R. The Existence of a General Corpuscular Field Due to the Sun - 380
Mustel, É. R. Corpuscular Velocities in Streams Responsible for M-Disturbances - 386

Nikol'skii, G. M., see Ivanov-Kholodnyi, G. S. - 754
Nikol'skii, G. M., see Mogilevskii, É. I. - 225
Nikol'skaya, K. I., see Mogilevskii, É. I. - 225
Noskova, R. I., see Amenitskii, N. A. - 177
Noskova, R. I., see Kuz'min, A. D. - 909

Obridko, V. N. Excitation of the Ca II K Line in the Solar Chromosphere - 961
Oganesyan, R. S. Gravitational Instability of a Layer Relative to Two-Dimensional Transverse Disturbances - 434
Oganesyan, R. S. The Prevailing Orientation of Fragments Formed by Stratification of a Homogeneous Gravitating Medium in a Magnetic Field - 634
Ol', A. I. The Possible Periodicity of Solar Activity - 212
Orlov, A. A. A Generalization of the Roche Model - 845
Orlyanskii, A. D., see Katasev, L. A. - 110
Ortenberg, F. S. The Relative Intensity of the ZrO Bands as a Criterion for the Temperature of M and S Stars - 941
Osherovich, A. L., see Rodionov, S. F. - 880
Otryashenkov, Yu. M., see Efimov, A. A. - 140

Panaiotov, L. A. The Compensation of Refraction Effects with the Aid of a Vacuum Prism - 317
Pariiskii, N. N. The Influence of Earth Tides on the Secular Retardation of the Earth's Rotation - 515
Pavlov, N. N. To the Editor - 738
Peregudov, F. I. Dependence of the Duration of a Meteor Reflection Record on the Radar System Parameters - 502
Perel', Yu. G. Plenum of the Commission on the History of Astronomy - 572
Perel', Yu. G. Problems Relating to the History of Astronomy Discussed at the Intercollege Conference on the History of the Physical and Mathematical Sciences - 881
Pikel'ner, S. B. and S. A. Kaplan. Interstellar Gas Dynamics - 564
Pikel'ner, S. B. The Mechanism of Formation of Active Regions in the Presence of a Magnetic Field - 590
Pil'nik, G. P. Collimation Errors in Astronomical Observations - 539
Platonov, Yu. P., see Ishchenko, M. A. - 150
Polupan, P. N. Spectrophotometry of the Chromospheric Limb Flare of October 11, 1957 - 965
Popova, M. D. The Curvature of the Paths of Some Meteors During their Motion Through the Earth's Atmosphere - 332
Porfir'ev, V. V., see Krasnozhenov, E. P. - 560
Pronik V. I. Maximum Thermal Radio Emissions in the Galaxy in the Direction $l = 353°$, $b = 0°$ - 415
Pronik, V. I. Diffuse Nebulae and Early-Type Star Models - 935
Pronik, V. I., see Gershberg, R. E. - 1055
Pskovskii, Yu. P. Some Systematic Effects and the Calibration of the Extragalactic Distance Scale - 805
Pskovskii, Yu. P. First-Order Anisotropy in the Red Shifts of 310 Galaxies – The Method of Antipodes - 993

Radlova, L. N. The Color of the Bright Rays on the Lunar Surface - 990
Razmadze, N. A. A Superdense Planetary Nebula - 322
Razmadze, N. A. Spectrophotometry of Faint Planetary Nebulae - 938
Riekstyn'sh, É. Ya., see Shteins, K. A. - 998
Rodionov, S. F. and A. L. Osherovich. In Answer to the Article by V. I. Moroz, "Night Sky Infrared Spectrum to 3.4μ" - 880
Rostovskaya, A. A. Types of Blue Galaxies - 418
Rublev, S. V. The Approximate Solution of the Transfer Equation for a Plane Gray Photosphere Taking Account of the Blanketing Effect - 645
Rublev, S. V. Profiles of Emission Lines Formed in Moving Stellar Envelopes. I. - 780
Ruskol, E. L. The Origin of the Moon. I. Formation of a Swarm of Bodies Around the Earth - 657

Saakyan, G. S., see Ambartsumyan, V. A. - 187

Sakharov, V. I. The Fourth Latitude Conference - 566
Salomonovich, A. E. The Localization of Solar Radio Bursts on a Wavelength of 8 mm - 904
Salomonovich, A. E., see Amenitskii, N. A. - 177
Salomonovich, A. E., see Kuz'min, A. D. - 279
Salomonovich, A. E., see Kuz'min, A. D. - 909
Severnyi, A. B. and V. P. Shabanskii. The Generation of Cosmic Rays in Flares - 583
Severnyi, A. B., N. P. Steshenko, and V. L. Khokhlova. The Spectroscopy of Solar Flares with Echelette Gratings - 19
Shabanskii, V. P., see Severnyi, A. B. - 583
Sharov, A. S., see Dibai, É. A. - 628
Shatsova, R. B. The Dispersion in the Logarithms of the Tangential Velocities of Stars in the Lower Part of the Spectrum-Luminosity Diagram - 324
Shatsova, R. B. The Luminosity Function of Red Dwarfs - 817
Shcheglov, P. V. Experience in Photographing Nebulae Using an Electronic Telescope - 556
Shklovskii, I. S. Secular Variation of the Flux and Intensity of Radio Emission from Discrete Sources - 243
Shklovskii, I. S. The Nature of Supernovae - 355
Shklovskii, I. S. A Note on the Nature of the Radio Source Sagittarius A - 562
Shklovskii, I. S. Radio Galaxies - 885
Shklovskii, I. S., see Gringauz, K. I. - 680
Shklovskii, I. S., V. I. Moroz, and V. G. Kurt. The Nature of the Earth's Third Radiation Belt - 871
Shteins, K. A. and É. Ya. Riekstyn'sh. On the Diffusion of Comets. I. - 998
Shuiskaya, F. K. Determination of the Balmer Decrement in Auroral Spectra - 178
Sitnik, G. F. General Principles for the Realization of a Model of a Blackbody at a High Temperature - 74
Sitnik, G. F. A Blackbody Model Operable at High Temperature - 1013
Sivers, V. N., see Kaplan, S. A. - 7
Sivers, V. N., see Kaplan, S. A. - 776
Skripkin, V. A. Relativistic Corrections in the Problem of a Point Explosion in an Ideal Gravitating Continuous Medium - 267
Slonim, Yu. M. The Intense Chromospheric Flares of July 10 and 14, 1959 - 327
Smirnov, E. I., V. S. Stepanov, and S. S. Tovchigrechko. A Solar-Sidereal Synchronous Motor (SZSD-1) for Driving Quartz Clocks - 868
Sobolev, V. V. The Brightness of a Spherical Nebula - 1
Sobolev, V. V. The Theory of Stellar Evolution - 372
Sopel'nikov, M. D. and I. V. Baulin. A Spark Chronoscope for the Oscillographic Reception of Time Signals - 145
Sopel'nikov, M. D., see Bryzzhev, L. D. - 549
Stankevich, K. S. Monochromatic-Radio Emission of Interstellar Molecular Hydrogen Ions - 917
Starikova, G. A. Luminosity and Color Functions of Stars - 451
Starikova, G. A. A Determination of the Expected Number of Stars in Different Regions of the Sky - 640
Stepanov, V. E. The Absorption Coefficient in the Inverse Zeeman Effect for Arbitrary Multiplet Splitting and the Transfer Equation for Light with Mutually Orthogonal Polarization - 603
Stepanov, V. E., see Boyarchuk, A. A. - 766
Stepanov, V. S., see Smirnov, E. I. - 868
Steshenko, N. P., see Severnyi, A. B. - 19
Strand, K. Aa. Photographic Measures of Double Stars - 1041
Sukharev, L. N. The Simultaneous Determination of Latitude and Clock Correction from Observations of Four Stars at the Same Altitude - 528
Sukhov, V. B., see Ishchemko, M. A. - 150

Teifel', V. G. Spectropolarimetry of Some Regions of the Lunar Surface - 669
Teplitskaya, R. B. A Comparison of the Curves of Growth for the Center and the Limb of the Solar Disc - 49
Tovchigrechko, S. S., see Smirnov, E. I. - 868
Tsitsin, F. A. Book review: The Dynamics of Steller Systems, K. F. Ogorodnikov - 1060
Tsitsin, F. A., see Dibai, É. A. - 628

Vitkevich, V. V. The Solar Supercorona from the Observations of 1951-1958 - 31
Vitkevich, V. V. Radio Astronomical Observations of Moving Plasma Clouds in the Solar Supercorona - 897
Vitkevich, V. V. News on Radio Astronomy Research in the USA - 1064
Vitkevich, V. V. and M. V. Gorelova. Dynamic Spectra and Principal Characteristics of Short-Lived Bursts of Solar Radio Emission - 595
Volkonskaya, T. G., see Masevich, A. G. - 40
Vorontsov-Vel'yaminov, B. A. Colloquium on Galactic and Extragalactic Astronomy and Electronic Photography - 337
Vorontsov-Vel'yaminov, B. A. Ring Galaxies - 365
Vorontsov-Vel'yaminov, B. A. Partial Gas Densities in Comet 1942g Whipple - 674
Vorontsov-Vel'yaminov, B. A. The Comparison of Galaxy Diameters - 735
Vorontsov-Vel'yaminov, B. A. Variations in the Spectrum of the Planetary Nebula IC 4997 and Their Origin - 929
Vorontsov-Vel'yaminov, B. A. A Method for Classifying Very Narrow Stellar Spectra - 1053

Yakovlev, N. V. The Application of Mirror-Lens Objectives for Photographing Artificial Earth Satellites - 523
Yarov-Yarovoi, M. S. The Explicit Expression for First-Order Secular Perturbations in Terms of the Orbit Elements - 722
Yarov-Yarovoi, M. S. The Application of Hansen's Ideal Coordinates - 850

Zhevakin, S. A. Phase and Amplitude Variations in Radiation Traversing a Nonadiabatic Envelope of a Pulsating Star - 422

Zhevakin, S. A. One Common Error in the Theory of Stellar Variability - 793

SOVIET ASTRONOMY - AJ: ANALYTIC SUBJECT INDEX FOR VOL 4

(Russian original Vol. 37, 1960, the journal Astronomicheskii Zhurnal)

Entries will be found under the following headings:

Absorption of Light
Announcements
Artificial Satellites
Associations of Stars
Astrometry
Astronomy, History and Progress
Atomic and Molecular Spectra
Aurorae
Biographical Material
Books on Sale
Book Reviews
Celestial Mechanics
Clusters, Open
Colors of Stars
Color-Magnitude Diagram
Comets
Conferences and Meetings
Cosmic Rays
Cosmogony and Cosmology
Crab Nebula
Double and Multiple Stars
Earth, Albedo
Earth, Atmosphere
Earth, Magnetic Field
Earth, Rotation
Eclipse, Solar
Emission-Line Stars
Envelopes, Stellar
Galaxies
Galaxy, The (Milky Way)
Gas, Degenerate
Gas Dynamics
Geodesy
Hydrodynamics
Hydrogen
Instruments and Accessories
Interplanetary Medium
Interstellar and Intergalactic Medium
Ionosphere
Latitude
Letters to the Editor
Luminosity Function
Magnetohydrodynamics
Meteors
Moon
Navigation and Nautical Astronomy
Nebulae, Diffuse
Nebulae, Planetary
Night Sky
Nonstable Stars
Novae and Supernovae
Orbits, Theory and Computation
Period-Amplitude Relation
Photographic Process and Materials
Photography, Electronic
Planets and Satellites, Observations
Polarization and Polarimetry
Practical Astronomy
Proper Motions
Radiation and Energy Transport
Radio Astronomy, Cosmic Sources
Radio Astronomy, Galactic Thermal Emission
Radio Astronomy, General Considerations
Radio Astronomy, Meteors
Radio Astronomy, Moon and Planets
Radio Astronomy, Sun
Refraction, Atmospheric
Relativity
Rockets, Observations from
Scattering of Light
Shock Waves
Solar-Terrestrial Relationships
Spectral Classification
Spectrophotometry
Spectroscopy, Stellar
Spectrum, Line Identification
Spectrum-Luminosity Diagram
Stars, Distribution in Space
Stars, Structure and Evolution
Stars, Temperature
Stars, Velocity
Stellar Systems, Dynamics
Sun, Chromosphere
Sun, Corona
Sun, Corpuscular Emission
Sun, Flares
Sun, Magnetic Fields
Sun, Photosphere
Sun, Structure
Sunspots
Synchrotron Radiation
Telescopes
Tides
Time Service and Time Signals
Transit Instrument
Van Allen Bands
Variable Stars
Zodiacal Light

Absorption of Light

Nebulae 1318a, 1318b, 1318c, and Interstellar Absorption. R. N. Ikhsanov - 258

Announcements

Abstracts of Astrophysical Articles Published in Radiofizika, Vol. 3, Nos. 1 and 2 (1960) -

From the Editor of the Astronomical Journal of the USSR - 575

Report on the Work of the Editors of Astronomical Journal -

Artificial Satellites

Conference on Problems in the Mathematical Theory of the Motion of Artificial Celestial Bodies. E. A. Grebenikov - 343

Long-Focus Cameras for Determining Coordinates of Faint Artificial Earth Satellites. M. K. Abele - 134

Photography of Space Rockets. A. M. Lozinskii - 876
The Application of Hansen's Ideal Coordinates. M. S. Yarov-Yarovoi - 850
The Application of Mirror-Lens Objectives for Photographing Artificial Earth Satellites. N. V. Yakovlev - 523
The Theory of Automatic Satellite Tracing Telescopes. M. Liigant and Ya. Einasto - 1023

Associations of Stars

Some Problems in the Interrelation of Stars and Nebulae, and their Evolution. R. N. Ikhsanov - 613

Astrometry

Collimation Errors in Astronomical Observations. G. P. Pil'nik - 539
The Compensation of Refraction Effects with the Aid of a Vacuum Prism. L. A. Panaiotov - 317

Astronomy, History and Progress

News on Radio Astronomy Research in the USA. V. Vitkevich - 1064
Plenum of the Commission on the History of Astronomy. Yu. G. Perel' - 572
Problems Relating to the History of Astronomy Discussed at the Intercollege Conference on the History of the Physical and Mathematical Sciences. Yu. G. Perel' - 881

Atomic and Molecular Spectra

Ionization and Excitation of Hydrogen. I. Elementary Processes for the Upper Levels. G. S. Ivanov-Kholodnyi, G. M. Nikol'skii and R. A. Gulyaev - 754
Nonhomogeneous Vector Coupling in Atomic Spectra. A. M. Gutman and I. B. Levinson - 83
The Absorption Coefficient in the Inverse Zeeman Effect for Arbitrary Multiplet Splitting and the Transfer Equation for Light with Mutually Orthogonal Polarization. V. E. Stepanov - 603
The Increase in the Equivalent Widths of Absorption Lines in a Magnetic Field. A. A. Boyarchuk, Yu. S. Efimov, and V. E. Stepanov - 766
The Relative Intensity of the ZrO Bands as a Criterion for the Temperature of M and S Stars. F. S. Ortenberg - 941

Aurorae

Determination of the Balmer Decrement in Auroral Spectra. F. K. Shuiskaya - 178

Biographical Material

Pavel Petrovich Parenago - 183

Books on Sale

Books (in Russian) on the Physical and Mathematical Sciences Scheduled for Issue in 1960 by the Academy of Sciences USSR - 576

Book Reviews

Atlas Eclipticalis, 1950, Antonin Bečvář. Reviewed by A. A. Mikhailov - 739
Celestial Mechanics, E. Finlay-Freundlich. Reviewed by M. S. Yarov-Yarovoi - 180
Interstellar Gas Dynamics, S. A. Kaplan. Reviewed by S. B. Pikel'ner - 564
The Dynamics of Stellar Systems. K. F. Ogorodnikov. Reviewed by F. A. Tsitsin - 1060

Celestial Mechanics

A Generalization of the Eddington–Poincaré Equation. N. N. Makeev - 1058
A Generalization of the Roche Model. A. A. Orlov - 845
Conference on Problems in the Mathematical Theory of the Motion of Artificial Celestial Bodies. E. A. Grebenikov - 343
Celestial Mechanics, E. Finlay-Freundlich. Reviewed by M. S. Yarov-Yarovoi - 180
Orbits in the Problem of Two Fixed Centers. V. G. Demin - 1005
The Application of Hansen's Ideal Coordinates. M. S. Yarov-Yarovoi - 850
The Explicit Expression for First-Order Secular Perturbations in Terms of the Orbit Elements. M. S. Yarov-Yarovoi - 722

Clusters, Open

A Statistical Analysis of the Color-Magnitude Diagram of the Open Cluster IC 1805. T. S. Kirillova - 308
A Study of the Open Cluster NGC 1605. K. A. Barkhatova and E. L. Chentsov - 812
Some Problems in the Interrelation of Stars and Nebulae, and their Evolution. R. N. Ikhsanov - 613
The Application of the Virial Theorem to the Dynamics of Star Clusters. É. A. Dibai, F. A. Tsitsin, and A. S. Sharov - 628
The Interpretation of the Spectrum-Luminosity Diagram for the Pleiades. É. V. Kotok - 465
The Open Cluster NGC 1513. K. A. Barkhatova and L. I. Dryakhlushina - 313

Colors of Stars

Luminosity and Color Functions of Stars. G. A. Starikova - 451

Color-Magnitude Diagram

A Statistical Analysis of the Color-Magnitude Diagram of the Open Cluster IC 1805. T. S. Kirillova - 308

Comets

On the Diffusion of Comets. I. K. A. Shteins and É. Ya. Riekstyn'sh - 998
Partial Gas Densities in Comet 1942g Whipple.

B. A. Vorontsov-Vel'yaminov - 674
The Form of Cometary Envelopes. L. S. Marochnik - 480

Conferences and Meetings

Colloquium on Galactic and Extragalactic Astronomy and Electronic Photography. B. A. Vorontsov-Vel'yaminov - 337
Conference on Problems in the Mathematical Theory of the Motion of Artificial Celestial Bodies. E. A. Grebenikov - 343
Plenum of the Commission on the History of Astronomy. Yu. G. Perel' - 572
Problems Relating to the History of Astronomy Discussed at the Intercollege Conference on the History of the Physical and Mathematical Sciences. Yu. G. Perel' - 881
The First Plenum of the Commission on the Physics of Stars and Nebulae. V. G. Gorbatskii - 340
The Fourth Latitude Conference. V. I. Sakharov - 566

Cosmic Rays

Supernova Outbursts and the Origin of Cosmic Rays. I. M. Gordon - 234
The Generation of Cosmic Rays in Flares. A. B. Severnyi and V. P. Shabanskii - 583
The Nature of γ-Emission in Solar Flares and the Formation of Cosmic Particles in Active Solar Regions. I. M. Gordon - 874

Cosmogony and Cosmology

Relativistic Corrections in the Problem of a Point Explosion in an Ideal Gravitating Continuous Medium. V. A. Skripkin - 267

Crab Nebula

The Radiation Flux from the Crab Nebula at λ 2μ, and Some Conclusions on the Spectrum and Magnetic Field. V. I. Moroz - 250

Double and Multiple Stars

A Generalization of the Roche Model. A. A. Orlov - 845
Photographic Measures of Double Stars. K. Aa. Strand - 1041

Earth, Albedo

Determination of the Earth's Albedo. É. K. Dzhasybekova, V. M. Kazachevskii, and A. V. Kharitonov - 125

Earth, Atmosphere

In Answer to the Article by V. I. Moroz, "Night Sky Infrared Spectrum to 3.4μ." S. F. Rodionov and A. L. Osherovich - 880
The Diurnal Sunlit Component of F2 Layer Ionization During the First Half of the Day. A. I. Likhachev - 129
The Night-Airglow Infrared Emission Spectrum to 3.4μ. V. I. Moroz - 118
The Polarization of Emission Lines in the Spectrum of the Night Sky. V. G. Fesenkov - 749
The Presence of Elliptical Polarization in the Light of the Day Sky. V. G. Fesenkov - 741

Earth, Magnetic Field

Corpuscular Velocities in Streams Responsible for M-Disturbances. E. R. Mustel' - 386
The Relation Between the Delay Time of Geomagnetic Disturbances and the Relative Sunspot Number. O. N. Mitropol'skaya - 60
Types of Irregular Geomagnetic Disturbances and the Mechanism of Interaction of a Solar Corpuscular Stream with the Outer Atmosphere. M. S. Bobrov - 392

Earth, Rotation

Determination of Frequency of a Maser, and of Irregularities in the Earth's Rotation. L. D. Bryzzhev, A. Ya. Leikin, and M. D. Sopel'nikov - 549
The Influence of Earth Tides on the Secular Retardation of the Earth's Rotation. N. N. Pariiskii - 515

Eclipse, Solar

The Solar Eclipse of February 15, 1961. A. A. Mikhailov - 64

Emission-Line Stars

A Spectrophotometric Study of χ Ophiuchi. II. Some Properties of the Emission Spectrum of χ Oph. I. D. Kupo - 85

Envelopes, Stellar

Phase and Amplitude Variations in Radiation Traversing a Nonadiabatic Envelope of a Pulsating Star. S. A. Zhevakin - 422
Profiles of Emission Lines Formed in Moving Stellar Envelopes. I. S. V. Rublev - 780

Galaxies

Colloquium on Galactic and Extragalactic Astronomy and Electronic Photography. B. A. Vorontsov-Vel'yaminov - 337
First-Order Anisotropy in the Red Shifts of 310 Galaxies—The Method of Antipodes. Yu. P. Pskovskii - 993
General Features of the Evolution of Rotating Systems of Gravitating Bodies. T. A. Agekyan - 298
Radio Galaxies. I. S. Shklovskii - 885
Ring Galaxies. B. A. Vorontsov-Vel'yaminov - 365
Some Systematic Effects and the Calibration of the Extragalactic Distance Scale. Yu. P. Pskovskii - 805
The Comparison of Galaxy Diameters. B. A. Vorontsov-Vel'yaminov - 735
Types of Blue Galaxies. A. A. Rostovskaya - 418

Galaxy, The (Milky Way)

Maximum Thermal Radio Emissions in the Galaxy in the Direction $l = 353°$ $b = 0°$. V. I. Pronik - 415
Some Problems in the Interrelation of Stars and Nebulae, and their Evolution. R. N. Ikhsanov - 613

Gas, Degenerate

The Degenerate Superdense Gas of Elementary Particles. V. A. Ambartsumyan and G. S. Saakyan - 187

Gas Dynamics

Expansion of a Sodium Cloud in Interplanetary Space. S. A. Kaplan and V. G. Kurt - 508
Interstellar Gas Dynamics, S. A. Kaplan. Reviewed by S. B. Pikel'ner - 564

Geodesy

The Application of Geodetic Principles to Practical Astronomy. A. V. Butkevich - 154

Hydrodynamics

Gravitational Instability of a Layer Relative to Two-Dimensional Transverse Disturbances. R. S. Oganesyan - 434

Hydrogen

Ionization and Excitation of Hydrogen. I. Elementary Processes for the Upper Levels. G. S. Ivanov-Kholodnyi, G. M. Nikol'skii, and R. A. Gulyaev - 754
Maximum Thermal Radio Emissions in the Galaxy in the Direction $l = 353°$, $b = 0°$. V. I. Pronik - 415
Monochromatic-Radio Emission of Interstellar Molecular Hydrogen Ions. K. S. Stankevich - 917

Instruments and Accessories

A Birefringent Filter for Astrophysical Studies of the Sun in the K Line of Ionized Calcium. S. B. Ioffe and N. M. Drichko - 1032
A Blackbody Model Operable at High Temperature. G. F. Sitnik - 1013
A New Design of a Differential Photometer for a Solar Magnetograph. L. M. Kotlyar - 445
An Integrating Stellar Spectrophotometer. N. A. Dimov - 440
An Oscillographic Apparatus for the Reception of Time Signals. M. A. Ishchemko, Yu. P. Platomov, and V. B. Sukhov - 150
A Recording Microphotometer Capable of Automatic Transformation of the Density of Photographic Emulsions Into Corresponding Intensity Values. L. M. Kotlyar - 833
A Solar-Sidereal Synchronous Motor (SZSD-1) for Driving Quartz Clocks. E. I. Smirnov, V. S. Stepanov, and S. S. Tovchigrechko - 868
A Spark Chronoscope for the Oscillographic Reception of Time Signals. M. D. Sopel'nikov and I. V. Baulin - 145
Experience in Photographing Nebulae Using an Electronic Telescope. P. V. Shcheglov - 556
Long-Focus Cameras for Determining Coordinates of Faint Artificial Earth Satellites. M. K. Abele - 134
Photoelectric Method for Recording Circle Readings of Meridian Instruments. A. A. Efimov and Yu. M. Otryashenkov - 140
Photography of Space Rockets. A. M. Lozinskii - 876
Stellar Photography Using an Electronic Telescope. V. F. Esipov - 558
The Application of Mirror-Lens Objectives for Photographing Artificial Earth Satellites. N. V. Yakovlev - 523
The Compensation of Refraction Effects with the Aid of a Vacuum Prism. L. A. Panaiotov - 317
The Theory of Automatic Satellite Tracking Telescopes. M. Liigant and Ya. Einasto - 1023

Interplanetary Medium

Results of Observations of Charged Particles Observed out to R = 100,000 km, with the Aid of Charged-Particle Traps on Soviet Space Rockets. K. I. Gringauz, V. G. Kurt, V. I. Moroz, and I. S. Shklovskii - 680
The Nature of the Earth's Third Radiation Belt. I. S. Shklovskii, V. I. Moroz, and V. G. Kurt - 871

Interstellar and Intergalactic Medium

Contribution to the Detection of the Absorption Radio Line of Interstellar CH Molecules. G. E. Brengauz - 554
Monochromatic-Radio Emission of Interstellar Molecular Hydrogen Ions. K. S. Stankevich - 917
Motion of an Envelope of Variable Mass. I. N. Minin - 878
Nebulae 1318a, 1318b, 1318c, and Interstellar Absorption. R. N. Ikhsanov - 258
Interstellar Gas Dynamics, S. A. Kaplan. Reviewed Reviewed by S. B. Pikel'ner - 564
The Origin of Cometary Nebulae. É. A. Dibai - 13
The Prevailing Orientation of Fragments Formed by Stratification of a Homogeneous Gravitating Medium in a Magnetic Field. R. S. Oganesyan - 634

Ionosphere

The Diurnal Sunlit Component of F2 Layer Ionization During the First Half of the Day. A. I. Likhachev - 129

Latitude

The Fourth Latitude Conference. V. I. Sakharov - 566
The Simultaneous Determination of Latitude and Clock Correction from Observations of Four Stars at the Same Altitude. L. N. Sukharev - 528

The Simultaneous Determination of Latitude and Longitude from Absolute Measurements of the Altitude of Two Stars. R. V. Kunitskii - 1046

Letters to the Editor

A Note on the Nature of the Radio Source Sagittarius A. I. S. Shklovskii - 562
In Answer to the Article by V. I. Moroz, "Night Sky Infrared Spectrum to 3.4μ." S. F. Rodionov and A. L. Osherovich - 880
Motion of an Envelope of Variable Mass. I. N. Minin - 878
To the Editor. N. N. Pavlov - 738

Luminosity Function

Luminosity and Color Functions of Stars. G. A. Starikova - 451
The Luminosity Function of Red Dwarfs. R. B. Shatsova - 817

Magnetohydrodynamics

The Generation of Cosmic Rays in Flares. A. B. Severnyi and V. P. Shabanskii - 583

Meteors

A Theory of Ionization of Meteor Trails. II. The Role of Ionization Phenomena at the Surface of a Meteoroid in the Ionization of the Meteor Trail. A. M. Furman - 705
Dependence of the Duration of a Meteor Reflection Record on the Radar System Parameters. F. I. Peregudov - 502
Formation of an Ionized Meteor Trail. V. P. Dokuchaev - 106
Radar-Echo Observations of Meteors Using Two Receivers of Different Sensitivity. L. A. Katasev, V. N. Korpusov, and A. D. Orlyanskii - 110
Results of a Study of Photographs of the Bolide of May 11, 1955. É. N. Kramer - 696
The Curvature of the Paths of Some Meteors During their Motion Through the Earth's Atmosphere. M. D. Popova - 332
The Dependence of the Mean Hourly Rates of Recorded Meteors on the Parameters of Meteoroids, the Atmosphere, and the Radar System. E. I. Fialko - 711
The Duration Distribution of Meteor Radio Echoes. II. Reflections from Unstable Trails. E. I. Fialko - 498
The Mechanism of Formation of a Meteor Trail. B. A. Mirtov - 485
The Structure of the Quadrantid Meteor Stream. B. L. Kashcheev and V. N. Lebedinets - 114
The Theory of Ionization in Meteor Trails. I. Kinetics of the Variation of Ionization Parameters for Meteoroids Heated by Motion in the Earth's Atmosphere. A. M. Furman - 489
The Velocity of the Distribution of Meteoroids. E. I. Fialko - 334

Moon

Photometric Peculiarities of the Moon. V. G. Fesenkov - 468
Radioimage of the Moon at 8 mm. N. A. Amenitskii, R. I. Noskova, and A. E. Salomonovich - 177
Spectropolarimetry of Some Regions of the Lunar Surface. V. G. Teifel' - 669
The Color of the Bright Rays on the Lunar Surface. L. N. Radlova - 990
The Origin of the Moon. I. Formation of a Swarm of Bodies Around the Earth. E. I. Ruskol - 657
The Photography of the Reverse Side of the Moon—Techniques and Preliminary Results. Yu. N. Lipskii - 976

Navigation and Nautical Astronomy

Choice of Celestial Body for Compass Error Determinations in the Case of Dead Reckoning Errors. N. N. Ezhov - 166

Nebulae, Diffuse

Diffuse Nebulae and Early-Type Star Models. V. I. Pronik - 935
Nebulae 1318a, 1318b, 1318c, and Interstellar Absorption. R. N. Ikhsanov - 258
On the Nature of Cyg X. R. N. Ikhsanov - 923
Some Problems in the Interrelation of Stars and Nebulae, and their Evolution. R. N. Ikhsanov - 613
The Brightness of a Spherical Nebula. V. V. Sobolev - 1
The First Plenum of the Commission on the Physics of Stars and Nebulae. V. G. Gorbatskii - 340
The Origin of Cometary Nebulae. É. A. Dibai - 13
The Suspected Peculiar Nebula Near η Geminorum. R. E. Gershberg and V. I. Pronik - 1055

Nebulae, Planetary

A Superdense Planetary Nebula. N. A. Razmadze - 322
Spectrophotometry of Faint Planetary Nebulae. N. A. Razmadze - 938
Variations in the Spectrum of the Planetary Nebula IC 4997 and Their Origin. B. A. Vorontsov-Vel'yaminov - 929

Night Sky

In Answer to the Article by V. I. Moroz, "Night Sky Infrared Spectrum to 3.4μ." S. F. Rodionov and A. L. Osherovich - 880
The Night-Airglow Infrared Emission Spectrum to 3.4μ. V. I. Moroz - 118
The Polarization of Emission Lines in the Spectrum of the Night Sky. V. G. Fesenkov - 749

Nonstable Stars

One Common Error in the Theory of Stellar Variability. S. A. Zhevakin - 793

Phase and Amplitude Variations in Radiation Traversing a Nonadiabatic Envelope of a Pulsating Star. S. A. Zhevakin - 422

Novae and Supernovae

Absorption Line Profiles in Spectra of Novae. E. P. Krasnozhenov and V. V. Porfir'ev - 560

Remarks on the Explanation of the Propagation of a Light Wave Around Nova Persei 1901. Y. K. Gulak - 653

Secular Variation of the Flux and Intensity of Radio Emission from Discrete Sources. I. S. Shklovskii - 243

Supernova Outbursts and the Origin of Cosmic Rays. I. M. Gordon - 234

The Nature of Supernovae. I. S. Shklovskii - 355

Orbits, Theory and Computation

Orbits in the Problem of Two Fixed Centers. V. G. Demin - 1005

The Application of Hansen's Ideal Coordinates. M. S. Yarov-Yarovoi - 850

The Explicit Expression for First-Order Secular Perturbations in Terms of the Orbit Elements. M. S. Yarov-Yarovoi - 722

Period-Amplitude Relation

Luminosity-Variation Amplitudes and the Applicability of a Blackbody Model to the Study of Cepheids. N. E. Kurochkin - 97

Photographic Process and Materials

Increasing the Sensitivity of Emulsions Used in Photography with Long Exposures. V.F. Esipov - 1037

Photography, Electronic

Colloquium on Galactic and Extragalactic Astronomy and Electronic Photography. B. A. Vorontsov-Vel'yaminov - 337

Experience in Photographing Nebulae Using an Electronic Telescope. P. V. Shcheglov - 556

Stellar Photography Using an Electronic Telescope. V. F. Esipov - 558

Planets and Satellites, Observations

Radio Emission from Venus in the 8 mm Band. A. D. Kuz'min and A. E. Salomonovich - 279

Results of Studies of Contrast on Mars. N. P. Barabashov and I. K. Koval' - 283

Some Remarks on the Dust and Haze Formations on Mars. N. P. Barabashov and V. I. Garazha - 473

Theoretical Phase Curves of the Shadow Effect on Saturn's Rings. I. Derivation of Pertinent Formulas. M. S. Bobrov - 288

The Radius of Venus. D. Ya. Martynov - 798

Polarization and Polarimetry

The Absorption Coefficient in the Inverse Zeeman Effect for Arbitrary Multiplet Splitting and the Transfer Equation for Light with Mutually Orthogonal Polarization. V. E. Stepanov - 603

The Presence of Elliptical Polarization in the Light of the Day Sky. V. G. Fesenkov - 741

The Polarization of Coronal Emission Lines. É. I. Mogilevskii, G. M. Nikol'skii, and K. I. Nikol'skaya - 225

The Polarization of Emission Lines in the Spectrum of the Night Sky. V. G. Fesenkov - 749

Practical Astronomy

Choice of Celestial Body for Compass Error Determinations in the Case of Dead Reckoning Errors. N. N. Ezhov - 166

Collimation Errors in Astronomical Observations. G. P. Pil'nik - 539

The Application of Geodetic Principles to Practical Astronomy. A. V. Butkevich - 154

The Simultaneous Determination of Latitude and Clock Correction from Observations of Four Stars at the Same Altitude. L. N. Sukharev - 528

The Simultaneous Determination of Latitude and Longitude from Absolute Measurements of the Altitude of Two Stars. R. V. Kunitskii - 1046

To the Editor. N. N. Pavlov - 738

Proper Motions

Photographic Proper Motions and the Mean Parallax of RW Aurigae Variables. N. M. Artyukhina - 91

Radiation and Energy Transport

A Blackbody Model Operable at High Temperature. G. F. Sitnik - 1013

Application of the Probability Method to the Determination of Absorption-Line Profiles. M. A. Arakelyan - 945

Chromospheric Line Profiles. V. V. Ivanov - 954

General Principles for the Realization of a Model of a Blackbody at a High Temperature. G. F. Sitnik - 74

Phase and Amplitude Variations in Radiation Traversing a Nonadiabatic Envelope of a Pulsating Star. S. A. Zhevakin - 422

Some Notes on the Emission of Light by Shock Waves under Cosmic Conditions. S. A. Kaplan and L. A. Klimishin - 264

The Absorption Coefficient in the Inverse Zeeman Effect for Arbitrary Multiplet Splitting and the Transfer Equation for Light with Mutually Orthogonal Polarization. V. E. Stepanov - 603

The Approximate Solution of the Transfer Equation for a Plane Gray Photosphere Taking Account of the Blanketing Effect. S. V. Rublev - 645
The Brightness of a Spherical Nebula. V. V. Sobolev - 1
The General Problem of the Scattering of Light in an One-Dimensional Medium with a Moving Boundary. S. A. Kaplan and V. N. Sivers - 776
The Scattering of Light in a Medium with a Moving Boundary. S. A. Kaplan, I. A. Klimishin, and V. N. Sivers - 7
The Theory of Stellar Evolution. V. V. Sobolev - 372

Radio Astronomy, Cosmic Sources

A Note on the Nature of the Radio Source of Sagittarius A. I. S. Shklovskii - 562
Observations of Discrete Radio Sources on 9.6 cm. A. D. Kuz'min, M. T. Levchenko, R. I. Noskova, and A. E. Salomonovich - 909
On the Nature of Cyg X. R. N. Ikhsanov - 923
Radio Galaxies. I. S. Shklovskii - 885
Secular Variation of the Flux and Intensity of Radio Emission from Discrete Sources. I. S. Shklovskii - 243

Radio Astronomy, Galactic Thermal Emission

Maximum Thermal Radio Emissions in the Galaxy in the Direction l = 353°, b = 0°. V. I. Pronik - 415

Radio Astronomy, General Considerations

Contribution to the Detection of the Absorption Radio Line of Interstellar CH Molecules. G. E. Brengauz - 554
Monochromatic-Radio Emission of Interstellar Molecular Hydrogen Ions. K. S. Stankevich - 917
News on Radio Astronomy Research in the USA. V. V. Vitkevich - 1064

Radio Astronomy, Meteors

Dependence of the Duration of a Meteor Reflection Record on the Radar System Parameters. F. I. Peregudov - 502
Formation of an Ionized Meteor Trail. V. P. Dokuchaev - 106
Radar-Echo Observations of Meteors Using Two Receivers of Different Sensitivity. L. A. Katasev, V. N. Korpusov, and A. D. Orlyanskii - 110
The Dependence of the Mean Hourly Rates of Recorded Meteors on the Parameters of Meteoroids, the Atmosphere, and the Radar System. E. I. Fialko - 711
The Duration Distribution of Meteor Radio Echoes. II. Reflections from Unstable Trails. E. I. Fialko - 498
The Structure of the Quadrantid Meteor Stream. B. L. Kashcheev and V. N. Lebedinets - 114
The Velocity Distribution of Meteoroids. E. I. Fialko - 334

Radio Astronomy, Moon and Planets

Radio Emissions from Venus in the 8 mm Band. A. D. Kuz'min and A. E. Salomonovich - 279
Radioimage of the Moon at 8 mm. N. A. Amenitskii, R. I. Noskova, and A. E. Salomonovich - 177

Radio Astronomy, Sun

Dynamic Spectra and Principal Characteristics of Short-Lived Bursts of Solar Radio Emission. V. V. Vitkevich and M. V. Gorelova - 595
Radio Astronomical Observations of Moving Plasma Clouds in the Solar Supercorona. V. V. Vitkevich - 897
The Localization of Solar Radio Bursts on a Wavelength of 8 mm. A. E. Salomonovich - 904
The Relationship Between Optical and Radio-Frequency Emissions of the Solar Corona. M. N. Gnevyshev - 217

Refraction, Atmospheric

The Compensation of Refraction Effects with the Aid of a Vacuum Prism. L. A. Panaiotov - 317

Relativity

Relativistic Corrections in the Problem of a Point Explosion in an Ideal Gravitating Continuous Medium. V. A. Skripkin - 267

Rockets, Observations from

Results of Observations of Charged Particles Observed out to R = 100,000 km, with the Aid of Charged-Particle Traps on Soviet Space Rockets. K. I. Gringauz, V. G. Kurt, V. I. Moroz, and I. S. Shklovskii - 680

Scattering of Light

The Brightness of a Spherical Nebula. V. V. Sobolev - 1
The General Problem of the Scattering of Light in a One-Dimensional Medium with a Moving Boundary. S. A. Kaplan and V. N. Sivers - 776
The Scattering of Light in a Medium with a Moving Boundary. S. A. Kaplan, I. A. Klimishin, and V. N. Sivers - 7

Shock Waves

Relativistic Corrections in the Problem of a Point Explosion in an Ideal Gravitating Continuous Medium. V. A. Skripkin - 267
Some Notes on the Emission of Light by Shock Waves Under Cosmic Conditions. S. A. Kaplan and I. A. Klimishin - 264
The Generation of Cosmic Rays in Flares. A. B. Severnyi and V. P. Shabanskii - 583

Solar-Terrestrial Relationships

Corpuscular Velocities in Streams Responsible for M-Disturbances. E. R. Mustel' - 386

The Diurnal Sunlit Component of F2 Layer Ionization During the First Half of the Day. A. I. Likhachev - 129
The Generation of Plasma Waves by Solar Corpuscular Streams. M. A. Gintsburg - 913
The Intense Chromospheric Flares of July 10 and 14, 1959. Yu. M. Slonim - 327
The Relation Between the Delay Time of Geomagnetic Disturbances and the Relative Sunspot Number. O. N. Mitropol'skaya - 60
Types of Irregular Geomagnetic Disturbances and the Mechanism of Interaction of a Solar Corpuscular Stream with the Outer Atmosphere. M. S. Bobrov - 392

Spectral Classification

A Method for Classifying Very Narrow Stellar Spectra. B. A. Vorontsov-Vel'yaminov - 1053

Spectrophotometry

An Integrating Stellar Spectrophotometer. N. A. Dimov - 440
A Spectrophotometric Study of χ Ophiuchi. II. Some Properties of the Emission Spectrum of χ Oph. I. D. Kupo - 85
General Principles for the Realization of a Model of a Blackbody at a High Temperature. G. F. Sitnik - 74
Spectrophotometry of Faint Planetary Nebulae. N. A. Razmadze - 938
Spectrophotometry of the Chromospheric Limb Flare of October 11, 1957. P. N. Polupan - 965

Spectroscopy, Stellar

Absorption Line Profiles in Spectra of Novae. E. P. Krasnozhenov and V. V. Porfir'ev - 560
Application of the Probability Method to the Determination of Absorption-Line Profiles. M. A. Arakelyan - 945
Calculations of the Flux of Stellar Radiation on a Spectrograph Slit. G. V. Borodina - 841
Profiles of Emission Lines Formed in Moving Stellar Envelopes. I. S. V. Rublev - 780
The Increase in the Equivalent Widths of Absorption Lines in a Magnetic Field. A. A. Boyarchuk, Yu. S. Efimov, and V. E. Stepanov - 766

Spectrum, Line Identification

The Spectroscopy of Solar Flares with Echelette Gratings. A. B. Severnyi, N. P. Steshenko, and V. L. Khokhlova - 19

Spectrum-Luminosity Diagram

The Dispersion in the Logarithms of the Tangential Velocities of Stars in the Lower Part of the Spectrum-Luminosity Diagram. R. B. Shatsova - 324
The Interpretation of the Spectrum-Luminosity Diagram for the Pleiades. É. V. Kotok - 465

Stars, Distribution in Space

A Determination of the Expected Number of Stars in Different Regions of the Sky. G. A. Starikova - 640
Photographic Proper Motions and the Mean Parallax of RW Aurigae Variables. N. M. Artyukhina - 91

Stars, Structure and Evolution

Diffuse Nebulae and Early-Type Star Models. V. I. Pronik - 935
Phase and Amplitude Variations in Radiation Traversing a Nonadiabatic Envelope of a Pulsating Star. S. A. Zhevakin - 422
The Degenerate Superdense Gas of Elementary Particles. V. A. Ambartsumyan and G. S. Saakyan - 187
The First Plenum of the Commission on the Physics of Stars and Nebulae. V. G. Gorbatskii - 340
The Structure of the Sun. A. G. Masevich and T. G. Volkonskaya - 40
The Theory of Stellar Evolution. V. V. Sobolev - 372

Stars, Temperature

The Relative Intensity of the ZrO Bands as a Criterion for the Temperature of M and S Stars. F. S. Ortenberg - 941

Stars, Velocity

The Dispersion in the Logarithms of the Tangential Velocities of Stars in the Lower Part of the Spectrum-Luminosity Diagram. R. B. Shatsova - 324

Stellar Systems, Dynamics

A Generalization of the Eddington-Poincaré Equation. N. N. Makeev - 1058
General Features of the Evolution of Rotating Systems of Gravitating Bodies. T. A. Agekyan - 298
Remarks on the Problem of Stability in Stellar Dynamics. V. A. Antonov - 859
The Application of the Virial Theorem to the Dynamics of Star Clusters. É. A. Dibai, F. A. Tsitsin, and A. S. Sharov - 628
The Dynamics of Stellar Systems. K. F. Ogorodnikov Reviewed by F. A. Tsitsin - 1060

Sun, Chromosphere

A Birefringent Filter for Astrophysical Studies of the Sun in the K Line of Ionized Calcium. S. B. Ioffe and N. M. Drichko - 1032
Chromospheric Line Profiles. V. V. Ivanov - 954
Excitation of the Ca II K Line in the Solar Chromosphere. V. N. Obridko - 961

Sun, Corona

Radio Astronomical Observations of Moving Plasma Clouds in the Solar Supercorona. V. V. Vitkevich - 897

The Polarization of Coronal Emission Lines. É. I. Mogilevskii, G. M. Nikol'skii, and K. I. Nikol'skaya - 225
The Relationship Between Optical and Radio-Frequency Emissions of the Solar Corona. M. N. Gnevyshev - 217
The Solar Supercorona from the Observations of 1951-1958. V. V. Vitkevich - 31

Sun, Corpuscular Emission

Corpuscular Velocities in Streams Responsible for M-Disturbances. E. R. Mustel' - 386
The Existence of a General Corpuscular Field Due to the Sun. E. R. Mustel' - 380
The Generation of Plasma Waves by Solar Corpuscular Streams. M. A. Gintsburg - 913
The Total Energy of Corpuscular Streams. E. R. Mustel' - 202
Types of Irregular Geomagnetic Disturbances and the Mechanism of Interaction of a Solar Corpuscular Stream with the Outer Atmosphere. M. S. Bobrov - 392

Sun, Flares

Spectrophotometry of the Chromospheric Limb Flare of October 11, 1957. P. N. Polupan - 965
The Generation of Cosmic Rays in Flares. A. B. Severnyi and V. P. Shabanskii - 583
The Intense Chromospheric Flares of July 10 and 14, 1959. Yu. M. Slonim - 327
The Localization of Solar Radio Bursts on a Wavelength of 8 mm. A. E. Salomonovich - 904
The Nature of γ-Emission in Solar Flares and the Formation of Cosmic Particles in Active Solar Regions. I. M. Gordon - 874
The Spectroscopy of Solar Flares with Echelette Gratings. A. B. Severnyi, N. P. Steshenko, and V. L. Khokhlova - 19

Sun, Magnetic Fields

A New Design of a Differential Photometer for a Solar Magnetograph. L. M. Kotlyar - 445
The Mechanism of Formation of Active Regions in the Presence of a Magnetic Field. S. B. Pikel'ner - 590

Sun, Photosphere

A Comparison of the Curves of Growth from the Center and the Limb of the Solar Disc. R. B. Teplitskaya - 49
The Approximate Solution of the Transfer Equation for a Plane Gray Photosphere Taking Account of the Blanketing Effect. S. V. Rublev - 645

Sun, Structure

The Structure of the Sun. A. G. Masevich and T. G. Volkonskaya - 40

Sunspots

The Circulatory Nature of the Eleven-Year Cycle of Solar Activity - V. F. Chistyakov - 405
The Effect of Sunspot Magnetic Fields on the Growth Curve. A. I. Kornilov - 174
The Latitudinal Motions of Nonrecurrent Sunspots in Different Years as Members of a Single Aggregate. M. A. Klyakotko - 330
The Possible Periodicity of Solar Activity. A. I. Ol' - 212
The Relation Between the Delay Time of Geomagnetic Disturbances and the Relative Sunspot Number. O. N. Mitropol'skaya - 60

Synchrotron Radiation

Secular Variation of the Flux and Intensity of Radio Emission from Discrete Sources. I. S. Shklovskii - 243
Supernova Outbursts and the Origin of Cosmic Rays. I. M. Gordon - 234

Telescopes

The Application of Mirror-Lens Objectives for Photographing Artificial Earth Satellites. N. V. Yakovlev - 523
The Theory of Automatic Satellite Tracking Telescopes. M. Liigant and Ya. Einasto - 1023

Tides

The Influence of Earth Tides on the Secular Retardation of the Earth's Rotation. N. N. Pariiskii - 515

Time Service and Time Signals

An Oscillographic Apparatus for the Reception of Time Signals. M. A. Ishchemko, Yu. P. Platonov, and V. B. Sukhov - 150
A Solar-Sidereal Synchronous Motor (SZSD-1) for Driving Quartz Clocks. E. I. Smirnov, V. S. Stepanov, and S. S. Tovchigrechko - 868
A Spark Chronoscope for the Oscillographic Reception of Time Signals. M. D. Sopel'nikov and I. V. Baulin - 145
Determination of Frequency of a Maser, and of Irregularities in the Earth's Rotation. L. D. Bryzzhev, A. Ya. Leikin and M. D. Sopel'nikov - 549
The Simultaneous Determination of Latitude and Clock Correction from Observations of Four Stars at the Same Altitude. L. N. Sukharev - 528

Transit Instrument

Collimation Errors in Astronomical Observations. G. P. Pil'nik - 539
Photoelectric Method for Recording Circle Readings of Meridian Instruments. A. A. Efimov and Yu. M. Otryashenkov - 140

Van Allen Bands

Results of Observations of Charged Particles Observed out to R = 100,000 km, with the Aid of Charged-Particle Traps on Soviet Space Rockets. K. I. Gringauz, V. G. Kurt, V. I. Moroz, and I. S. Shklovskii - 680

The Nature of the Earth's Third Radiation Belt. I. S. Shklovskii, V. I. Moroz, and V. G. Kurt - 871

Variable Stars

Luminosity-Variation Amplitudes and the Applicability of a Blackbody Model to the Study of Cepheids. N. E. Kurochkin - 97

One Common Error in the Theory of Stellar Variability. S. A. Zhevakin - 793

Phase and Amplitude Variations in Radiation Traversing a Nonadiabatic Envelope of a Pulsating Star. S. A. Zhevakin - 422

Photographic Proper Motions and the Mean Parallax of RW Aurigae Variables. N. M. Artyukhina - 91

Zodiacal Light

The Energy Distribution in the Spectrum of Zodiacal Light. Z. V. Karyagina - 828